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Scungio

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[54] **KEY RING**

[75] Inventor: **Robert A. Scungio**, West Warwick, R.I.

[73] Assignee: **Linden D. Nelson**, Birmingham, Mich.

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[52] **U.S. Cl.** ..... **70/456 R**; 70/459

[58] **Field of Search** ..... 70/459, 456 R; 24/312; D3/61–65; 40/2 R, 10 R, 10 D, 15 R, 1 B, 20 R

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Primary Examiner—Robert L. Wolfe
Attorney, Agent, or Firm—Spencer & Frank

[57] **ABSTRACT**

A double ended key ring includes a housing and a cover which are pivotally connected. A bias mechanism urges the housing and cover into an open position thereby providing access to an opening therebetween for mounting or removing keys or keyholders. A latch mechanism is pivotally mounted relative to the housing for releasably holding the cover in the closed position. The entire bias mechanism and the latch mechanism is effectively concealed when the key ring is in the engaged or closed position, in which position the removal of keyholders is precluded.

8 Claims, 1 Drawing Sheet

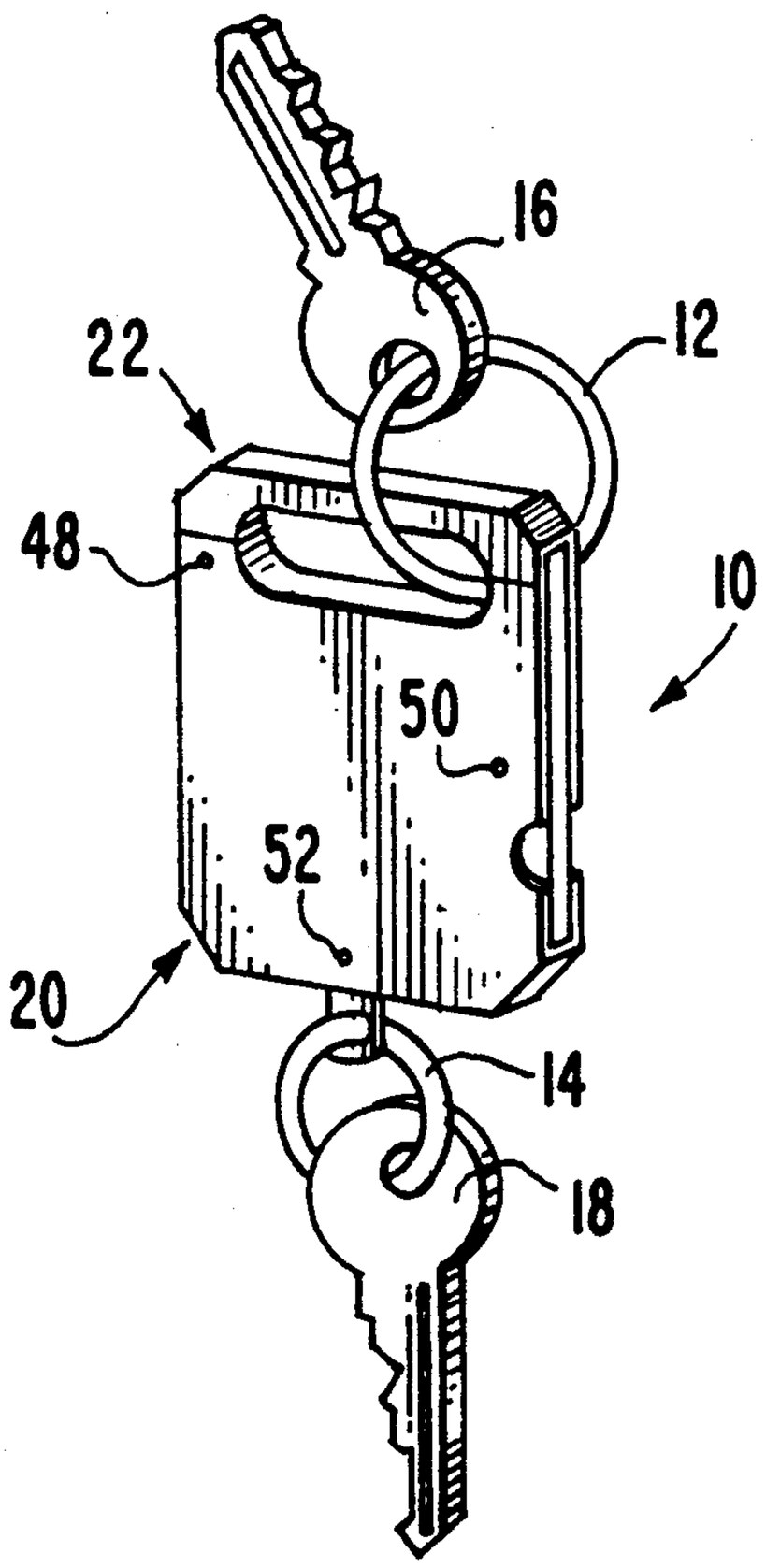


FIG. 1

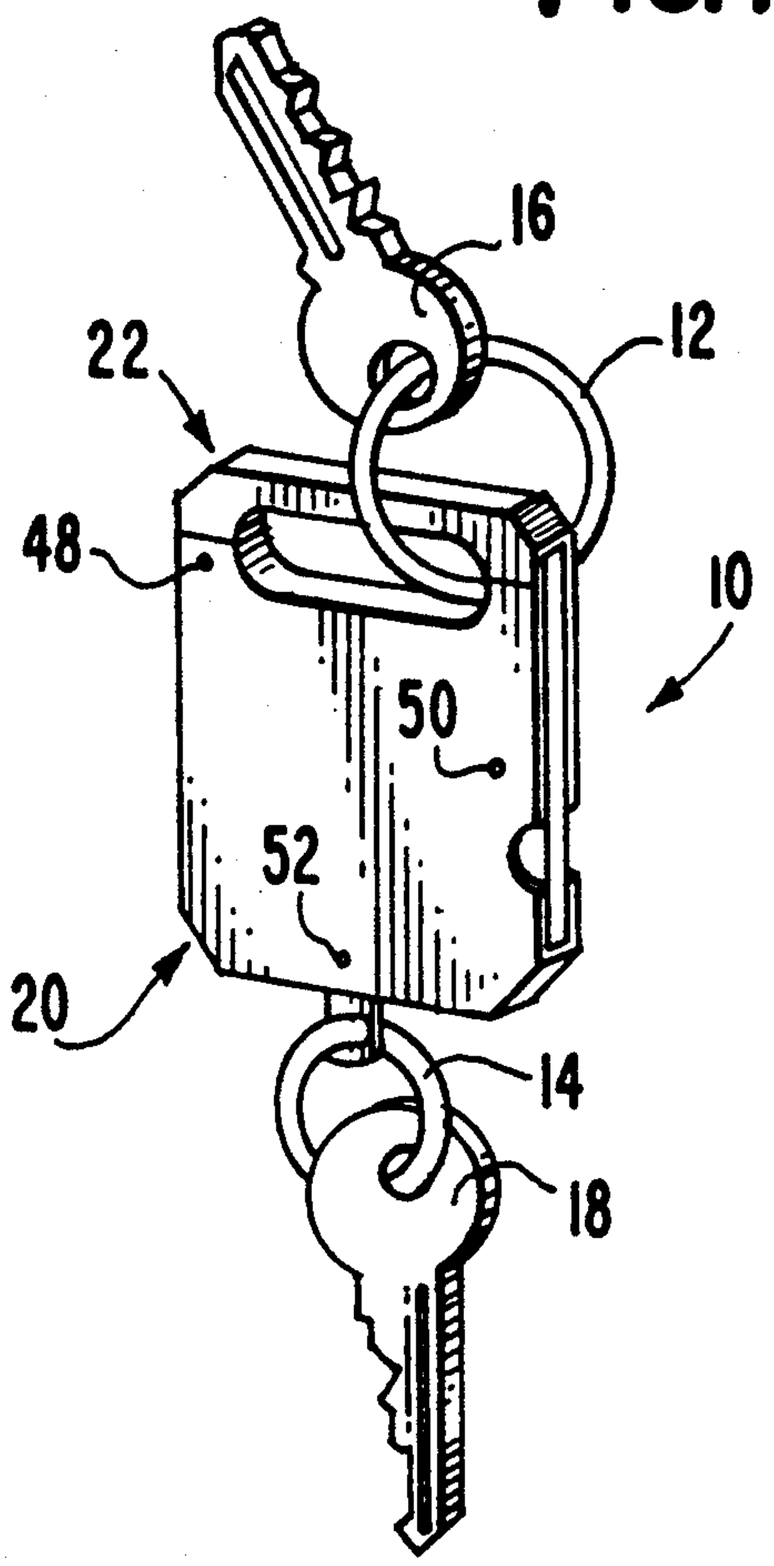


FIG. 2

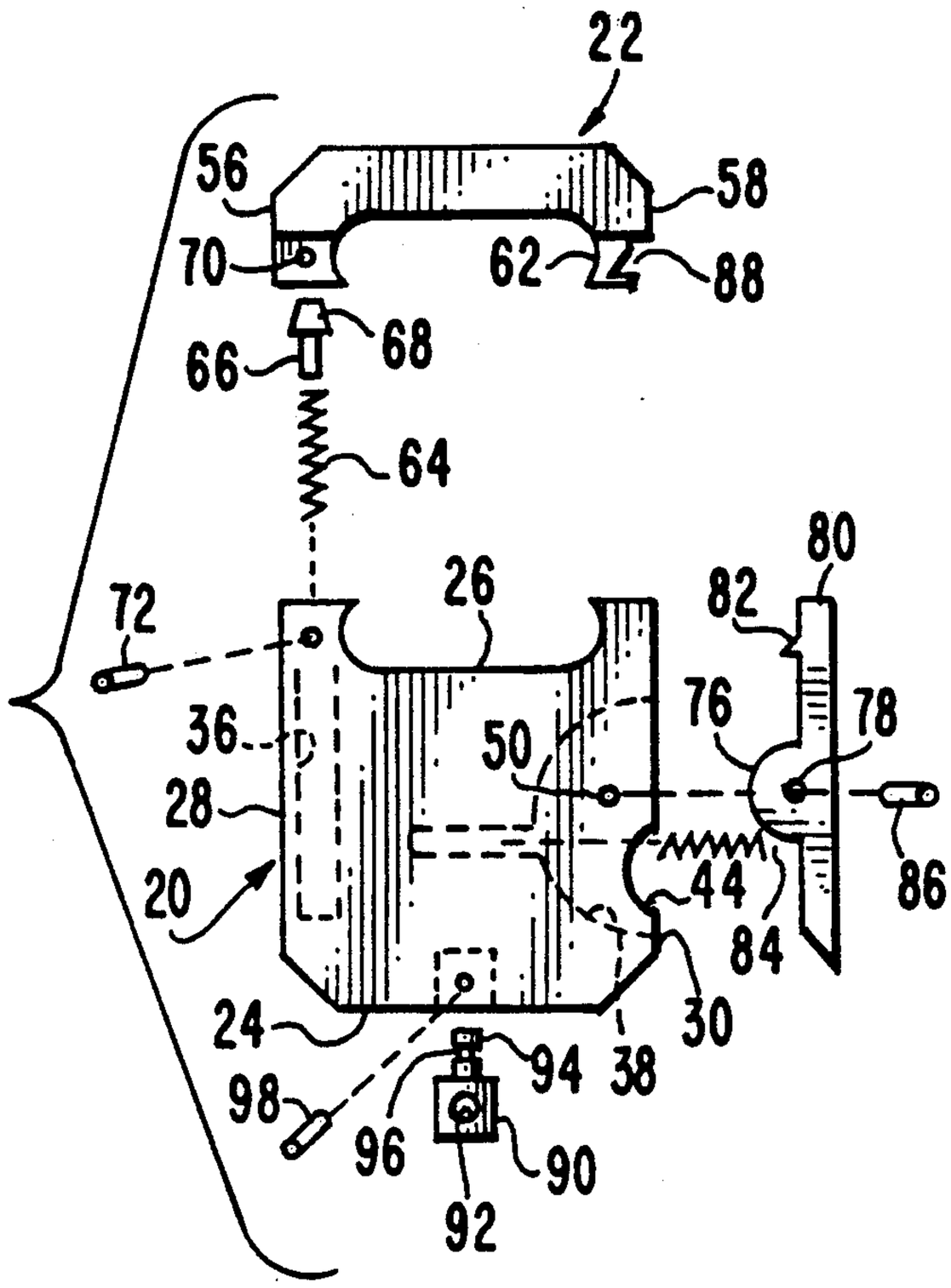
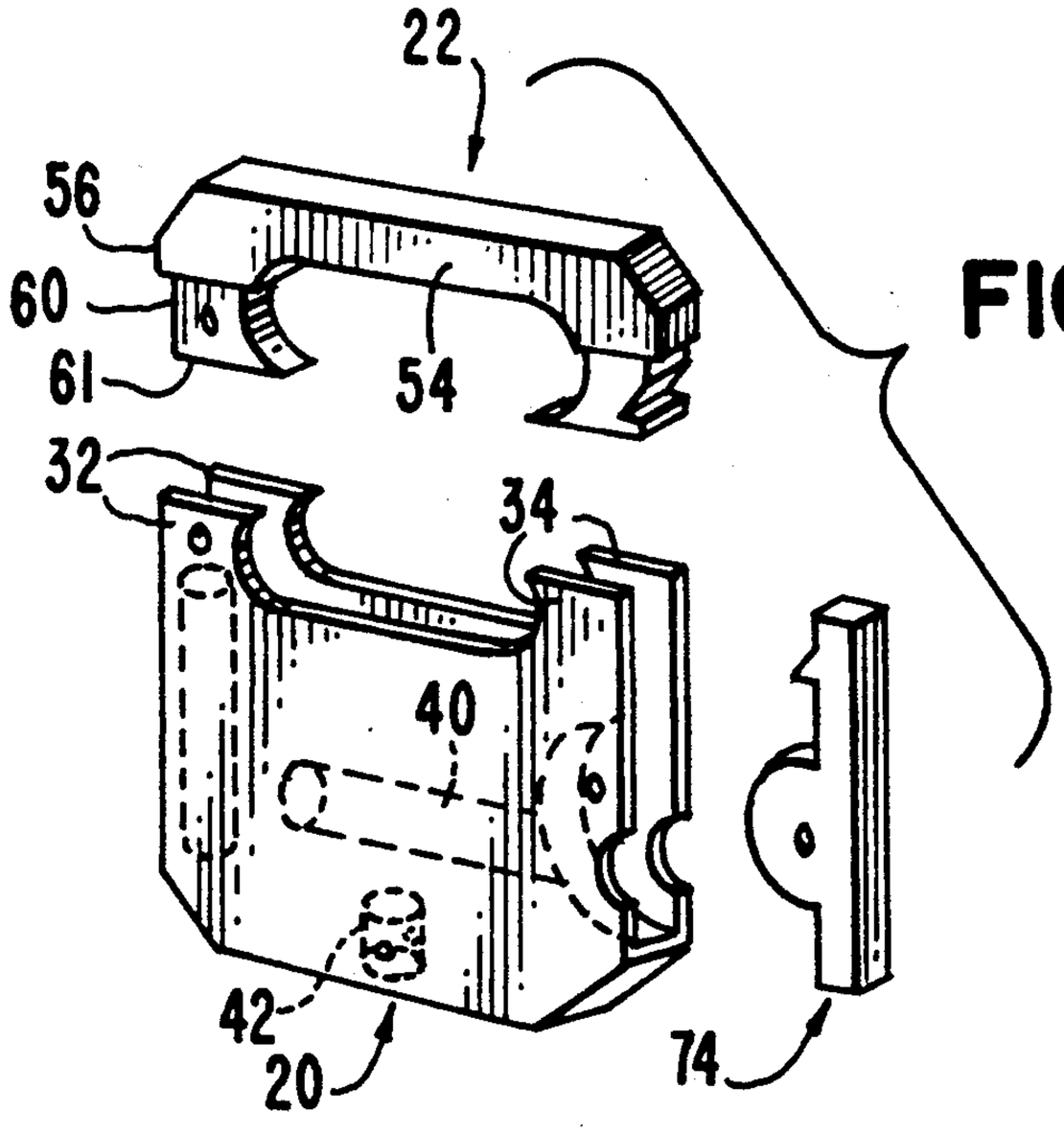


FIG. 3



KEY RING

BACKGROUND OF THE INVENTION

The present invention is directed to an improvement in key rings for retaining one or more keys on each of one or two keyholders. More specifically, the present invention relates to an improved, double ended key ring for retaining a key holder and having a unique release means for detachably removing at least one of the keyholders.

Conventional double ended key rings typically employ a pair of keyholders positioned at opposite ends of a central housing. Keys may be segregated and one or more keys placed on each of the keyholders; one or perhaps both of the keyholders is removably secured to the key ring thereby enabling the user of the keys to selectively remove keyholders (or even keys) from the double ended key ring easily.

For example, automobile keys may be placed on one end of a double ended key ring and house keys may be placed on the other end of a double ended key ring to maintain those keys as separate. Examples of conventional double ended key rings are illustrated in MacDonald U.S. Pat. Des. Nos. 271,443 of Nov. 22, 1983 and Des. 285,987 of Oct. 7, 1986.

Typical prior art double ended key rings are illustrated in U.S. Pat. No. 2,916,907 to Bridwell, U.S. Pat. No. 3,957,591 to Nadell and U.S. Pat. No. 4,821,543 to Scungio.

None of the key rings described or illustrated in the aforementioned patents provides a substantially concealed, nonobtrusive release mechanism for removing keys (or keyholders) from a key ring.

Thus there is a need for a fast, reliable, inexpensive releasing means for key rings and, in particular, for double ended key rings.

SUMMARY OF THE INVENTION

The present invention overcomes the shortcomings of the prior art by providing a new, unique and improved releasable key ring.

The present invention includes a key ring, preferably a double ended key ring, comprising a housing which is open at the top and a cover pivotably mounted relative to the housing. The cover and housing have an engaged position and an open position, and are pivotable relative to each other between the engaged and open positions. The cover and housing have an opening therebetween for retaining one or more keys (or more or more keyholders) and when the cover and housing are in the open position access is provided to the opening. When the cover and housing are in the engaged position access to the opening is prevented. A cover biasing means urges the cover into the open position and a latch is provided in the housing for maintaining the cover in the engaged position against the cover biasing means. Means are provided for releasing the latch and, in a preferred embodiment, the latch releasing means is part of the latch itself.

BRIEF DESCRIPTION OF THE DRAWINGS

The various objects of the present invention, together with other advantages and benefits which may be attained by its use, will become more apparent upon reading the following detailed description of the invention taken in conjunction with the drawings.

In the drawings, wherein like reference numerals identify corresponding ,parts of the invention:

FIG. **1** is a perspective illustrated of a double ended key ring according to the principles of the present invention;

FIG. **2** is an exploded front elevation view of the present invention; and

FIG. **3** is a partial perspective exploded illustration of a portion of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring first to FIG. **1** of the drawings, a double ended key ring **10** is illustrated having a keyholder **12**, **14** mounted at each end of the double ended key ring **10**. A key **16** is illustrated as being mounted on the keyholder **12** and a key **18** is illustrated as being mounted on the keyholder **14**.

The double ended key ring **10** includes a housing **20** and a cover **22** pivotably mounted relative to the housing.

With reference to the exploded illustrations of FIGS. **2** and **3**, the housing **20** is illustrated as a generally rectangular, partially hollow box having flat front and rear faces, a first or bottom end **24**, a second or top end **26** and opposed sides **28**, **30**. At the top end, the front and rear surfaces extend to form two pairs of laterally spaced apart ears or projections **32**, **34**, each pair being at one side of the housing.

The housing includes a first longitudinal bore **36** extending almost the full height of the housing, commencing at the top end **26** (opening between one pair of ears **32**), and extending downwardly toward the first end **24** adjacent one side **28** of the housing. A semicircular recess **38** is provided interiorly of the housing at the second side **30**. This recess **38** communicates with a bore **40** which extends substantially across the housing in a direction generally transverse to the longitudinal bore **36**.

At the first end or bottom **24** of the housing a short bore **42** is provided with an axis generally parallel to the axis of bore **36**. A slight depression or curved notch **44** is provided in the front and rear faces of the housing extending inwardly from the second side **30** near the vertical bottom of the recess **38**.

A pair of aligned apertures **48** is provided through the front and rear housing faces generally in the center of each of the first pair of ears **32** and transversely thereof. A second pair of aligned apertures **50** is provided through the front and rear faces extending transversely through the recess **38**. An aperture **52** is provided through the front face of the housing adjacent first end **24** in communication with bore **42**.

The cover **22** is a generally thin, flat, solid C-shaped member having a base or top **54** and opposed legs **56**, **58**. Depending downwardly from the legs **56**, **58** are a pair of projections **60**, **62**, respectively. The projections are of a reduced thickness, front to back, compared to the thickness of the remainder of the cover **22**, and the underside **61** of projection **60** is inclined. The thickness and width of projection **60** is such that it fits between the pair of ears **32**. The thickness and width of projection **62** is such that it fits between the second pair of ears **34**. The facing interior surfaces of the projections **60**, **62** and of the ears **32**, **34** are curved and with the cover assembled to the housing with projections **60**, **62** between their associated pairs of ears a generally rectan-

gular opening with flat sides and curved ends is defined therebetween.

Means are provided for biasing the cover into an open position relative to the housing. Specifically, a compression spring **64** is placed within the bore **36** and a bearing rod **66**, having an enlarged head **68** which functions as a bearing surface, is inserted into the bore **36** after the spring **64** has been placed within the bore. The enlarged head **68** of the rod, and more particularly the top of the head **68** will bear against the underside of the projection **60** such that when the cover **22** is pivotably mounted relative to the housing, the force of the compression spring on the rod **66** is transferred to the inclined bottom **61** of the projection **60** to urge the cover into an open position relative to the housing.

Means are provided for pivotally mounting the cover and housing relative to each other. Specifically, an aperture **70** is provided through the projection **60** and a pivot pin or rod **72** is provided. The diameter of aperture **70** is preferably larger than the diameter of pin **72** and aperture **48** such that when projection **60** is inserted between ears **32** and apertures **48** and **70** aligned, pin **72** may be inserted through apertures **48** and **70** so as to pivot the cover and housing together. The pin may be force fit into aperture **48**. Alternate fastening is, of course, feasible.

Means are provided to latch the housing and cover in the engaged position to close the opening therebetween and for selectively releasing the latch. With reference to the drawings, and in particular FIGS. **1** and **2**, the latch means and latch release means includes an elongated, thin rectangular latch bar **74** having a semicircular protuberance **76** on one side intermediate the opposite ends of the latch bar. An aperture **78** is provided transversely of the protuberance. A first end **80** of the latch bar includes a tooth **82** formed of an inclined surface which tooth extends laterally of the latch bar on the same side thereof as the protuberance **76**. A compression spring **84** is provided and with the spring **84** positioned in the bore **40**, the latch bar protuberance **76** may be inserted within the recess **38** until apertures **50** and **78** are aligned. Thereafter, a pivot pin or rod **86** is force fit into aperture **50** and through the slightly larger diameter aperture **78** to pivotally secure the latch bar **74** relative to the housing. In the orientation illustrated in FIGS. **1**, **2**, and **3** the spring **84** urges the latch bar counterclockwise. The projection **62** includes a slot **88** configured to receive the tooth **82** such that when the key ring is assembled as described the cover **22** may be pivoted clockwise relative to the housing such that the projection **62** moves between the pair of ears **34**. The projection **62** bears against the inclined surface of the tooth **82** to move the latch bar **74** clockwise against the force of the compression spring **84** until the cover **22** is completely closed relative to the housing. At that time, spring **84** urges the latch bar counterclockwise such that the tooth **82** engages the slot **88**. In this closed or engaged position there is no access to the elongated opening between the cover and housing.

The key ring of the present invention includes a rotatably mounted connector **90** having a bore **92** therethrough to receive a keyholder **14**. The connector **90** is a generally cylindrical member having a reduced diameter portion **94** with a circumferential groove **96** therein. The reduced diameter portion **94** is configured to be of slightly smaller diameter than the diameter of bore **42** such that the reduced diameter portion of the connector may be inserted into the bore **42** until the circumferential groove **96** is aligned relative to the aperture **52**. A pin **98** may thereafter be force fit through the aperture **52** into the reduced groove **96** such that the connector **90** is rotatably secured to the housing but longitudinal movement is precluded.

The operation of the key ring of the present invention will now be explained. With the key ring in the engaged position as illustrated generally in FIG. **1**, if it is desired to remove the keyholder **12**, the latch bar **74** is moved clockwise by external pressure exerted toward the first side **28**. This may be conveniently done by pressing against the latch bar **74** and, as the latch bar pivots in a clockwise direction, the semicircular depression **44** would accommodate the thumb or finger of a person utilizing the key ring of the present invention.

In response to the clockwise movement of the latch bar, tooth **82** is disengaged from slot **88** and the cover **22** pivots in a counterclockwise direction under the urging of the biasing spring **64**. This provides access to the opening such that the keyholder **12** may be removed. In this fashion, keys such as automobile ignition keys may remain with the vehicle while house keys may be retained by the user of the key ring. Spring **84**, of course, urges the latch bar back to a vertical position as soon as the external pressure on the latch bar is released.

After the keyholder **12** has been removed (or replaced within the opening) the cover **22** is manually pivoted in a clockwise direction against the bias spring **64**, until the projection **62** bears against the tooth **82** temporarily causing the latch bar to pivot clockwise until the projection **62** is seated between the pair of ears **34** at which time the spring **84** will urge the latch bar counterclockwise until the tooth **82** engages the slot **88** in the projection **62**.

It should be appreciated that in lieu of a keyholder, an actual key may be engaged within the opening if the key has a sufficiently large aperture therein.

In the embodiment of the present invention, each of the springs are preferably stainless steel and the other components are brass. After the key ring is assembled, conventional metal finishing is employed such as sanding (tumbling), polishing and decorative plating. The key ring may be made of other strong or rigid materials such as plastics, wood, etc. The housing may, of course, be embossed with a trademark or a logo of an automobile manufacturer or with other decorative designs. The various directions such as top, bottom, clockwise, etc., are purely for illustrative purposes.

The foregoing is a complete description of the preferred embodiment of the present invention. Numerous changes may be made without departing from the spirit and scope of the present invention. The invention, therefore, should be limited only by the following claims.

What is claimed is:

1. A key ring, comprising:

a housing having an end and having a side that is transverse to the end;

an elongated cover having first and second ends, the cover having a slot adjacent the second end;

means for pivotably mounting the first end of the cover at the end of the housing, the cover being movable with respect to the housing between an engaged position and an open position, the housing and cover together defining an opening for retaining at least one key holder in the engaged position and the second end of the cover being spaced apart

from the end of the housing in the open position; and

means for releasably latching the cover in the engaged position, the means for latching including

an elongated latch bar having a tooth,

means for pivotably mounting the latch bar at the side of the housing so that the tooth is positioned to engage the slot adjacent the second end of the cover when the cover is in the engaged position and so that the latch bar is directly manually accessible, and

spring means for urging the tooth into the slot when the cover is in the engaged position.

2. The invention as defined in claim **1** and further including means for biassing the cover and housing into said open position.

3. The invention as defined in claim **1** wherein said latch bar has an inner side which is concealed within the housing when said housing and cover are in the engaged position.

4. The invention as defined in claim **1**, wherein the side of the housing has a notch, wherein a portion of the latch bar is disposed in the notch when the tooth engages the slot, and wherein the portion of the latch bar that is disposed in the notch recedes as the latch bar is pivoted to disengage the tooth from the slot.

5. The invention as defined in claim **1**, wherein the cover has an elongated spine with a longitudinal axis, wherein the latch bar has a longitudinal axis, and wherein the axis of the spine of the cover is approximately perpendicular to the axis of the latch bar when the tooth engages the slot.

6. The invention as defined in claim **1**, wherein the cover and the latch bar are pivotably movable in a common plane, the common plane extending through the end of the housing and the side of the housing.

7. The invention as defined in claim **6**, wherein the housing has an addition end through which the common plane extends, the side of the housing being disposed between the end and the additional end, and further comprising means at the additional end of the housing for retaining at least one additional key holder.

8. The invention as defined in claim **1**, wherein the latch bar has an elongated outer side which is visible from outside the housing for substantially its entire length.

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